ABSTRACT OF THE DISCLOSURE

The direct detection of dielectric etch system magnet driver and coil malfunctions is disclosed. A dielectric etch system includes a plasma chamber in which a semiconductor wafer is placed to remove dielectric therefrom, and a number of coils positioned around the chamber to excite the plasma. Magnet drivers of a magnet driver circuitry provide configurable preset current from a power source to the coils. Malfunction detection circuitry includes a number of comparators connected in parallel. Each comparator couples between one of the magnet drivers and one of the coils. A relay couples the comparators to ground, and turns off the power source when any of the comparators yields a substantially non-zero current, which indicates that either the driver or the coil coupled to the comparator is malfunctioning.